IN THE CLAIMS

1. (canceled)

2. (currently amended) The packet buffer management system according to claim 3, wherein said operation control for the received packets includes delay for the packet, ~~packet~~ loss, packet order inversion, or error insertion, and said service classes are classified by an IP address or TCP/UDP port number comprised by the header portion of said packet.

3. (currently amended) A packet buffer management system used for simulating statuses of transferring packets having a variable length in an IP network, comprising:

a packet type identification control portion attaching a TAG information for identifying a service class to a received packet, which is of a variable length and is transferred in an IP network, according to an identification information of the received packet and outputting the received packet with the TAG information,

a buffer memory to store the received packet; and

a buffer management control portion to control writing and reading the received packet attached with the TAG information to and from said buffer memory,

wherein the buffer management control portion includes,

a service class characteristic table <u>setting characteristics for each packet in advance for the simulation of statuses of transferring packets having a variable length in an IP network by</u> defining ~~in which an operation control is set~~ <u>a packet control operation</u> for each received packet, corresponding to a service class, which is identified by the TAG information; ~~and,~~

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a conversion table in which allocated areas of said buffer memory corresponding to

service classes are stored, and

a packet output control portion controlling packets to output from the buffer memory,

wherein said conversion table modifies the allocated areas of said buffer memory

according to the number of service class settings in said service class characteristic table and

defines output physical ports, the areas of the buffer memory being allocated based on said

output physical ports, and

said packet output control portion managing the areas of the buffer memory from which

packets are to be read out and the order and timing of reading out the packets, according to

contents stored in the conversion table, so as to perform the characteristics for each packet set in

the service class characteristics table.

4. (canceled)

5. (previously presented) The packet buffer management system according to Claim 3,

further comprising a packet pointer management memory to store transfer pointers indicating the

storage position of packets stored in said packet buffer and time stamp values indicating the time

at which packets are stored,

wherein said buffer management control portion performs control of received packets

based on packet existence notification and said time stamp values, and based on the operation

control for the received packets, set in said service class characteristic table.

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6. (previously presented) The packet buffer management system according to Claim 5, wherein, as an operation control of said buffer management control portion, received packet order inversion and router path modification are performed by moving the transfer pointer based on said time stamp value.

7. (original) The packet buffer management system according to Claim 3, wherein operations to store packets in said buffer memory, packet registration operations, transfer pointer read operations, and packet transfer analysis operations are each performed in parallel.

8. (previously presented) The packet buffer management system according to Claim 5, further comprising means for storing in said packet pointer management memory the time of packet storage in said packet buffer as the time stamp, and for judging whether the packet can be transferred by comparing said time stamp with the reference time within the buffer management control portion at the time of packet transfer analysis, wherein when a preset delay time has not elapsed, said time stamp is stored in a time stamp buffer provided in service class units, and in subsequent transfer analysis the time stamp within said time stamp buffer is compared with the reference time.

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